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ABSTRACT

This article addresses issues related to one particular type of electronic messaging, namely e-mail. E-mail appears to serve two primary purposes in the world and society. First, it is used as a form of communication that allows individuals, no matter where they are located, to communicate with each other on a regular basis at a low cost. Second, is the use of e-mail to advertise and sell goods and services to individuals. E-mail as an instructional aid may provide students with greater access to faculty and peers, with the Internet providing access to a wider array of educational resources for students and faculty. Additionally, faculty may provide notes and materials to students through e-mail, allowing students to access this information at any time. Although there are many advantages to using e-mail, several disadvantages are inherent in the use of this technology. Two popular views have been posited about communication and relationships that develop through the use of electronic media, especially e-mail. One view portrays relationships that develop through the use of electronic media as shallow, impersonal, and often hostile, with only an illusion of a sense of community. The other view posits that electronic-mediated communication reduces the obstacles of physical locality, creates new, but genuine, personal relationships and communities. Only through sound empirical investigations can conclusions be made about the impact and usefulness of technology. (AEF)

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E-Mail: Communication of the Future?

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Technology has been infiltrating our lives for years, but today technology is an integral and often necessary part of our lives, and many people cannot seem to function without it. Technology presents us with many new opportunities, which have potential advantages and disadvantages for the world and societies that employ technology. As technology has become a more integral part of our lives, so does it bring about changes in the humans that use the technology and the interactions that occur between individuals. The use of technology to communicate has brought about many advances in human communications, such as more frequent contacts, quicker delivery, and multiple contacts. However, while there are many advantages to using multimedia messaging (e-mail, faxes, video and data exchange), what are the costs that come along with its use? Today, multimedia messaging is becoming a natural part of business, education and interpersonal relationships. This form of communication was not part of the natural repartee of individuals in the past, individuals focused on face-to-face interaction when dealing with each other. What is the impact of using electronic messaging to communicate?

As technology continues to influence our communication so does it affect our very lives. This article addresses issues related to one particular type of electronic messaging, namely e-mail. E-mail is the practice of sending information from one computer user directly to other computer users, allowing nearly instantaneous transmission of messages, to anyone or any number of people with personal computers connected to the Internet or mainframe computers. E-mail messages may be sent around the globe, to the person in the office across the hall, or to the desk next to the one sending the message. To use e-mail, all an individual basically needs is a computer and the ability to connect to the Internet. Once these two basic requirements are met the skills needed to use this new technology are extremely easy to learn and master. They can even be performed by many children. The ability to e-mail a vast amount of people around the world almost instantaneously is due to the development of the Internet.

The Internet was originally devised as a way of linking a few university and defense laboratories in the 1960s, but has grown into a global network, currently connecting between 30 and 40 million people. It is estimated that up to 160 million people will be connected by the year 2000 (Weil & Rosen, 1997). The Internet is currently an international network linking hundreds of smaller computer networks in North America, Europe and Asia. Through the use of the Internet, computer users can connect and communicate with a variety of computers and their services with little effort and expense. Three of the main services currently provided by the Internet are: remote login, allowing an individual to log onto remote computers; file transfer, moving or sending files from one computer to another; and electronic mail. The use of e-mail through the Internet appears to be one of the fastest growing forms of communication.

Currently, little research has focused on the impact of electronic messaging, especially e-mail on the lives of individuals. In the recent past, as little as five years ago, many would state that e-mail only impacts a small portion of the population and thus was not worthy of investigation. However, with the rapid increase in the use of technology, the growth of the Internet, computer accessibility and ease of use, this may no longer be the case. The impact of electronic messaging (e-mail) on the lives of individuals should be explored to help understand the positives as well as the negatives of e-mail use. This is quickly becoming evident as such mainstream institutions as *TIME* magazine documented the explosive growth of e-mail. From 1994 to 1996, the number of e-mail messages has swollen from 776 billion to 2.6 trillion, and is expected to top 6.6 trillion by the year 2000 (Gwynne & Dickerson, 1997). Additionally, the *N.Y. Times* recently reported on the changing of parental roles as technology increasing infiltrates the family at an ever increasing rate (Wire Reports, N.Y. Times, 1997). Taking these trends into consideration it becomes obvious that e-mail is proliferating at an astonishing rate and that we can no longer ignore its impact on society, families and the individuals in that society.

E-mail has become a natural part of many individuals lives, with some considering it a blessing, while others crediting it with creating a great deal of problems (Gwynne & Dickerson, 1997; Young, 199[illegible] Parks & Floyd, 1996).

Before we can discuss the problems inherent in using e-mail or relying on e-mail as the only form of communication, it is necessary to outline how e-mail is currently being used in the world and how it may be employed in the future. First, e-mail is being employed in all areas of society due to the speed, ease of use, lack of effort needed to seek the receiver of the message and the cost. E-mail is also one of the few forms of communication where a single message can easily be distributed to a multitude of recipients. E-mail may also be viewed as a more efficient form of communication, where individuals do not have to seek out the receiver of the message, just send it to their e-mail address. However, just sending an e-mail to an individual does not guarantee that the message was received or that the person will respond to the message.

Currently, e-mail appears to serve two primary purposes in the world and society. First, e-mail is being used as a form of communication that allows individuals, no matter where they are located, to communicate with each other on a regular basis at a low cost. Second, is the use of e-mail to advertise and sell goods and services to individuals. Due to the ever-changing nature of technology and society, how e-mail may be used in the future is difficult to tell, but several possibilities do seem to emerge. E-mail will continue to grow as a low cost communication form that will link not only people in one society, but will lead to the connection of multiple societies. This linkage of multiple societies may eventually lead to a blurring of the distinction between societies and individuals of the world. It is possible that through the use of e-mail and other technologies (language translators) a new world society could emerge through the linking of societies and individuals within those societies. E-mail will more than likely continue to grow as a business tool, not only to operate a single company, but to link several companies, all for the purpose of becoming more efficient and containing costs. In the educational realm, e-mail may become the mainstay of disseminating information to students and the primary form of communication between faculty and students. Finally, e-mail and it's various forms may replace the telephone as the primary mode of communication between people who are physically separated.

In the use of electronic mail as an instructional aid, e-mail may provide students with greater access to faculty and peers, with the Internet providing access to a wider array of educational resources for students and faculty. Additionally, faculty may provide notes and materials to students through e-mail, allowing students to access this information at any time, for as long as the information is needed. This is in contrast to having only the notes that a student may take, material handed out in class, office hours and class time with a faculty member. Trapp, Hammond and Bray (1996) note that electronic messaging and the Internet can be used to foster independent learning activities that cannot be undertaken in a traditional course. D'Souza (1991) conducted research that showed that students using e-mail as a communication aid scored significantly higher than students using a more traditional mode of class information and communication modes. Tella (1992) found that with the introduction of communication networks and e-mail into the classroom, learning became more autonomous, small group work increased, and teachers became co-learners with students. Finally, observational data concerning 700 undergraduate students' e-mail messages, showed that less than 50% of the messages addressed work-related concerns. For the most part, the majority of the e-mail messages served a purely social function with roughly 25% of the messages containing intimate content (McCormick & McCormick, 1992).

Although there are many advantages to using e-mail several disadvantages are inherent in the use of this technology. First, e-mail is a new mass media form, in which messages can come from a wide variety of individuals and sources, with little or no centralized control (Rafaeli & LaRose, 1993). This new form of communication blurs the boundaries between interpersonal and mass communication, raising new and exciting opportunities and potential risks for the way individuals relate to one another in the world (Lea & Spears, 1995).

Two popular views have been posited about communication and relationships that develop through the use of electronic media, especially e-mail. One view portrays relationships that develop through the use of electronic media as shallow, impersonal, and often hostile, with only an illusion of a sense of community (Berry, 1993; Stoll, 1995). The other view posits that electronic-mediated communication reduces the obstacles of physical locality, creates new, but genuine, personal relationships and communities (Pool, 1983).

Early research focused on the differences between small groups who communicated either face-to-face (FtF) or through computer-mediated communication (CMC). Findings have consistently pointed to the social disadvantages of CMC, positing that highly developed, positive personal relationships should rarely occur through the use of electronic media (Parks & Floyd, 1996). Culnan and Markus (1987) state that the differences that are observed can most often be explained by observing that many social cues are not possible through the use of e-mail and other electronic media. E-mail does not allow the receiver to focus on or perceive the physical context and nonverbal cues, such as vocal quality and tone, body posture and facial expressions that may be important to interpreting the actual meaning of the message. Thus, CMC would appear to have less information richness then FtF (Kiesler, Siegal, & McGuire, 1984) which may lead to a great deal of miscommunication. This in turn may lead to difficulty in developing personally meaningful relationships through

the use of e-mail and other forms of electronic media. Walther, Anderson, and Park (1994) pointed out that CMC is able to carry many aural and visual cues (included in the text of a message), but that they are restricted by the form of communication. The important point is not that personal and relational information cannot be communicated with CMC (e-mail), but rather that it may take longer to do so.

As research has moved from the laboratory to the field, studies have consistently shown the interpersonal side of CMC (e-mail). Users of CMC have reported on a consistent basis that they develop and maintain relationships, socialize, and receive emotional support via e-mail (McCormick & McCormick, 1992). Further evidence for this development and maintenance of personal relationships can be found in the popular press and some scholarly reports (Bock, 1994; Wilkins, 1991).

Although research appears to be mixed or inconsistent at the current time, the authors feel that e-mail communication and other forms of electronic media with their inherent shortcomings may lead to a variety of problems. Before we leap into this new form of communication and give up the more traditional face to face communication, the impact of these new forms of communication on humans and their interactions need to be examined. First, to develop a meaningful relationship, several prerequisite basic communication skills are required. These include the ability to vocally communicate, decipher the emotional content of messages and perceive and interpret nonverbal behaviors and cues. If individuals grow and develop in an age and society that is dominated by e-mail and other forms of electronic communication, individuals may not have the opportunities to develop and practice the necessary prerequisite skills to develop positive meaningful relationships later in life. This may already have become the case in many families. Several popular press reports (i.e., Wire Reports, NY Times, 1997) noted that children of today are part of the "techno generation." An ever-increasing number of children have their own phone line, access to e-mail, chat rooms and the Internet. It has been estimated that the number of households that have access to e-mail will double by the year 2000. This change in communication and the patterns of behavior associated with it has lead to long-accepted family rules being challenged or twisted in new directions (Wire Reports, NY Times, 1997).

E-mail changes the need to see or interact with others on a personal level, as communication through an electronic medium can happen more regularly and frequently, decreasing the need for personal interaction between individuals. Many medical and psychological experts agree that one of the potentially most disturbing trends with the technology of today (e-mail and Internet use) is that it is addictive (Wire Reports, NY Times, 1997; Young, 1996). The development of the addiction leads many people to spend hours interacting with technology and other individuals through the use of technology, and not interacting with families and friends on a personal level. Young (1996) reported a case of a 43-year-old homemaker who abused the Internet, resulting in significant impairment in her family life. The authors contend that relying primarily on e-mail and other forms of electronic media for communication may lead children and others to not develop and maintain the prerequisite social skills needed to establish and maintain long-lasting meaningful relationships with other individuals. Clearly, further research is needed into how e-mail and other forms of electronic media, as well as technology in general will impact the development of individuals in a society.

A second major concern deals with the use of e-mail in college campus communities. If we view the college experience as an extension of the socialization process that was started in childhood, and continued in secondary education, e-mail use may have some deleterious effects. If students primarily rely on e-mail to communicate with peers and faculty, instead of face-to-face communication, they may not practice or even develop the social skills necessary to establish and maintain long-lasting personal relationships. College is a time for students to take many of the skills that were learned and practiced under parental supervision and for the first time try them out in an environment totally independent from their parents and family. This may even become a bigger problem if children were raised in a technology-rich family environment and never developed socialization skills. These individuals entering college are suddenly thrust into an environment where those skills would be needed to develop relationships with roommates, peers and faculty members. For example, many students who attend college live in dormitories and need to be able to communicate face-to-face and develop relationships quickly with roommates, hall mates and others that reside in the dorm if they are to thrive in these new surroundings. Secondly, due to the amount of time that may be needed to eventually develop relationships through e-mail, students may not develop relationships quickly enough in this new environment to provide the social support needed to help with the adjustment to college life.

Another possible problem that may emerge due to the use of e-mail is that college students will still be tied to their family of origin at a level that does not allow them to initially test their independence and later to become fully independent. Instead of making decisions for themselves, e-mail would allow college students to communicate with family members on a daily basis, thus allowing the student to be dependent on the family for guiding or making decisions for the student. In short, e-mail may interfere with the process of individuation that occurs as children leave home and establish themselves in society and the world.

Finally, the third area that we would like to address is the use of e-mail in the classroom. Although, there are many advantages to using e-mail in the classroom, and some results have been promising, there may be some unwanted consequences that need to be considered. First, messages sent by a faulty member to a student may not be received, or if received, may not be read or acknowledge by the student. This may lead to a variety of difficulties in class management. For example, a faulty member may send a message on Monday requesting a student complete an assignment or reading for class on Wednesday. The student does not check e-mail message until Wednesday just before class and thus has no time to complete the assignment before class. Secondly, by decreasing the exposure time to faculty members, through the use of e-mail, we may be decreasing the time that students are exposed to appropriate professional role models. Thirdly, by using e-mail to communicate with students we may be inadvertently blocking or delaying the development of mentor relationships between faculty members and students that have been posited to be important for the development of competent professionals

Clearly, we have not yet fully realized the potential advantages and disadvantages of technology, especially e-mail. In reviewing the literature it would appear that most researchers have focused on the potential advantages gained through the use of technology and have ignored potential risks or disadvantages. With the constant pressure to incorporate technology into the lives of individuals and classrooms, the authors hope that this article highlights some of the potential risks of using e-mail and technology and that it spurs empirical investigations of the impact, both positive and negative on individuals. Only through sound empirical investigations can we make accurate conclusions about the impact and usefulness of technology.

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